Claims

What is claimed is:

1. An electrode for implant into live tissue, comprising:
a first layer having first and second portions, wherein the first portion comprises stiff material and forms a tip of the electrode and the second portion is disposed adjacent to the first portion and comprises flexible material;
a second layer comprising flexible material and disposed over the first layer; and
a third layer comprising flexible material and disposed over the second layer.

2. The electrode of claim 1 wherein the first layer further includes a third portion disposed adjacent to the second portion and comprising stiff material.

3. The electrode of claim 2 wherein the second portion of the first layer includes a first beveled edge between the first portion and second portion and a second beveled edge between the second portion and the third portion.

4. The electrode of claim 1 further including a conductor disposed between the second layer and the third layer.

5. The electrode of claim 1 further including a recording site disposed in the third layer.

6. The electrode of claim 5 wherein the recording site includes a transducer to convert physical phenomenon to an electrical signal.

7. The electrode of claim 1 wherein the second portion of the

first layer provides flexibility to allow movement of an end of the electrode opposite the tip end without substantial movement in the tip end of the electrode.

8. The electrode of claim 1 wherein the flexible material includes benzocyclobutene.

9. An electrode for implant into live tissue, comprising:

a first layer having first and second portions, wherein the first portion comprises stiff material and forms a tip of the electrode and the second portion is disposed adjacent to the first portion and comprises flexible material; and

a second layer comprising flexible material and disposed over the first layer.

10. The electrode of claim 9 wherein the stiff material includes silicon.

11. The electrode of claim 9 wherein the second portion of the first layer provides flexibility to allow movement of an end of the electrode opposite the tip end without substantial movement in the tip end of the electrode.

12. The electrode of claim 9 wherein the flexible material includes benzocyclobutene.

13. The electrode of claim 9 further including a third layer comprising flexible material and disposed over the second layer.

14. The electrode of claim 13 further including a recording site disposed in the third layer.

15. The electrode of claim 9 wherein the first layer further

includes a third portion disposed adjacent to the second portion and comprising stiff material.

16. The electrode of claim 15 wherein the second portion of the first layer includes a first beveled edge between the first portion and second portion and a second beveled edge between the second portion and the third portion.

17. An electrode for implant into live tissue, comprising:

a body; and

first and second prongs extending from the body, where each prong includes,

(a) a first layer having first and second portions, wherein the first portion comprises stiff material and forms a tip of the prong and the second portion is disposed adjacent to the first portion and comprises flexible material, and

(b) a second layer comprising flexible material and disposed over the first layer.

18. The electrode of claim 17 wherein the stiff material includes silicon.

19. The electrode of claim 17 wherein the second portion of the first layer provides flexibility to allow movement of the body without substantial movement in the tip end of the prong.

20. The electrode of claim 17 wherein the flexible material includes benzocyclobutene.

21. A method of manufacturing an electrode for implant into live tissue, comprising:

forming a first layer having first and second portions, wherein the first portion comprises stiff material and forms a tip of the electrode and the second portion is disposed

adjacent to the first portion and comprises flexible material; and

forming a second layer comprising flexible material and disposed over the first layer.

22. The method of claim 21 further including the step of forming a third layer comprising flexible material and disposed over the second layer.

23. The method of claim 21 further including the step of forming a third portion disposed adjacent to the second portion and comprising stiff material.

24. The method of claim 23 wherein the second portion of the first layer includes a first beveled edge between the first portion and second portion and a second beveled edge between the second portion and the third portion.

25. The electrode of claim 21 wherein the stiff material includes silicon.

26. The electrode of claim 21 wherein the flexible material includes benzocyclobutene.